

ONR BAA Announcement # 05-018



BROAD AGENCY ANNOUNCEMENT (BAA)

INTRODUCTION:

This publication constitutes a Broad Agency Announcement (BAA) as contemplated in Federal Acquisition Regulation (FAR) 6.102(d)(2). A formal Request for Proposals (RFP), solicitation, and/or additional information regarding this announcement will not be issued.

The Office of Naval Research (ONR) will not issue paper copies of this announcement. The ONR reserves the right to select for award all, some or none of the proposals in response to this announcement. The ONR reserves the right to fund all, some or none of the proposals received under this BAA. ONR provides no funding for direct reimbursement of proposal development costs. Technical and cost proposals (or any other material) submitted in response to this BAA will not be returned. It is the policy of ONR to treat all proposals as sensitive, competitive information and to disclose their contents only for the purposes of evaluation.

I. GENERAL INFORMATION

1. Agency Name -

Office of Naval Research,
875 N. Randolph Street, Suite 1425
Arlington, VA 22203-1995

2. Research Opportunity Title -

**Sea Base Transformational Package and Ordnance Rapid Transfer System
(TransPORTS) Prototype Demonstrator**

3. Program Name – Seabasing Innovative Naval Prototype (INP): TransPORTS

4. Research Opportunity Number -

ONR BAA – 05-018

5. Response Date -

Full Proposals are due by no later than 2:00 p.m. (Eastern Daylight Time) on 30 September 2005.

NOTE: Although full proposals are due on 30 September 2005, this BAA will remain open until 4 April 2008 since contractors will be required to submit a second, more detailed Phase II cost proposal as a deliverable of Phase I. However, only contractors who were awarded a Phase I contract will be considered for Phase II.

6. Research Opportunity Description -

Background:

The Office of Naval Research, beginning in FY06, is embarking on an effort to develop “Game Changing” Innovative Naval Prototypes (INPs) for Seabasing. The total INP Seabasing effort is currently programmed to run from FY06 through the end of FY11 with a total of \$295M programmed. Other Seabasing INP BAAs to be released include the Sea Base Connector Transformable-Craft (T-CRAFT) Prototype Demonstrator, the Personnel Transfer At-Sea Prototype Demonstrator, and the Sea Base Intermediate Transfer Station (ITS) Prototype Demonstrator.

This BAA addresses only a portion of the total Seabasing INP program and is specifically focused on the Sea Base Transformational Package and Ordnance Rapid Transfer System (TransPORTS) Prototype Demonstrator. Of the \$295M programmed for the Seabasing INPs, it is estimated that this total effort would cost less than \$125M.

The ultimate goal of this effort is to demonstrate the ability for an operator to key-in a pallet-sized product and have it delivered to any specific ship location with minimal human intervention.

Under this BAA, the Office of Naval Research (ONR 33) is soliciting proposals for a prototype demonstrator of a fully automated cargo handling system that integrates automated cargo tracking and warehouse functions with automated intra-ship cargo movement systems. The prototype is envisioned to be capable of processing cargo via pallets, Joint Modular Intermodal Containers (JMICS), or Quadcons. The cargo would enter the system via a topside access station which would scan/catalog the cargo and then the system would autonomously move the cargo through the platform to its storage location. It is envisioned that the intra-ship cargo movement system would seamlessly move the cargo between decks (vertical

movement) and subdivisions (horizontal movement) delivering the cargo to the appropriate cargo hold, where it is seamlessly transferred to an automated warehousing system which stores the cargo until retrieved. The prototype should consist of the necessary number of access stations, decks, subdivisions, and cargo holds to fully demonstrate system's capabilities in a shipboard environment. This includes demonstrating the ability to deal with compound hull curvature and watertight hull integrity, while maximizing stowage density. This automated system will allow the user to select a specific item at any access station and the total system would retrieve the item to the access station. In addition, each access station would have a real time cargo tracking function to identify where a specific cargo item is in the system. The access station would also have the capability of displaying real time cargo inventory levels.

It is envisioned that the prototype would be constructed and demonstrated both pier-side and at-sea in a relevant environment. Future operations of deployed systems onboard ships are expected to be 100 percent operational through the high end of Sea State 6. As such, the system must endure accelerations in all degrees of freedom in addition to the stresses and strains induced upon the system due to hull flexure in a seaway. Likewise, the system must be able to operate in areas of the ships which routinely experience vibration, caused by the ship's machinery systems.

Program Plan:

The Office of Naval Research (ONR 33) anticipates a two phase program.

The first phase of the program would consist of multiple awards for preliminary designs, which detail the technologies to be included in the prototype system (and associated platform) and how they meet the desired capabilities. This will include a detailed description of the system, the platform, and simulations demonstrating throughput capability. Phase I is anticipated to last for a period of 18 months. Each Phase I award is estimated to be valued at between \$2M and \$4M.

The government requires detailed Phase I and Phase II cost proposals under this solicitation. However, the cost proposal for Phase II will be required as one of the deliverables of Phase I. Using the detailed proposal for Phase II and the other Phase I deliverables, the government may then down select for a single Phase II award. This phase would consist of detailed design and construction of the full-scale prototype, along with pier-side and at-sea demonstration testing. Phase II is anticipated to have a period of performance of 42 months and a cost of less than \$100M.

Desired Capabilities of the TransPORTS Prototype

The Office of Naval Research has identified the following list of capabilities for the TransPORTS prototype:

1. Access Station through-put rate: Threshold of 60 pallets per hour per station.
Objective of 180 pallets per hour per station.

2. System must provide means of real-time automated tracking of handled assets. (e.g. barcode scanning, RFID tags, etc.). Wireless product demand.
3. System/platform must have:
 - a. Multiple access stations which are capable of receiving and delivering cargo
 - b. Multiple horizontal and vertical cargo pathways
 - c. Multiple cargo holds
 - d. Multiple decks and subdivisions
4. Full inventory awareness at each access station.
5. System must demonstrate ability to efficiently deal with compound hull curvature and watertight boundaries while maintaining a high stowage density. This applies to both the intra-ship cargo movement sub-system and the automated warehouse sub-system
6. System must be compatible with the following:
 - a. Pallets: 40" x 48" x 43"; 3,300lbs
 - b. QUADCONs: 57.5" x 96.0" x 82.0"; 8,200lbs
 - c. Joint Modular Intermodal Container (JMIC): 44" x 54" x 42"; 3,000lbs
7. System must have some mechanism(s) to restrain stationary and moving loads at all times.
8. Autonomous, seamless transition between vertical and horizontal material movement.
9. Designed for future shipboard operations (MPF(F)/LMSR sized vessels) through the high end of Sea State 6. System must not bind under external loading such as:
 - a. Must endure accelerations in all degrees of freedom:
 - i. 0.2g lateral (sway)
 - ii. 0.4g vertical (heave)
 - iii. 0.2g axial (surge)
 - b. Must handle flexure of supporting ship structure.
 - c. Must be operable at single amplitude significant roll angles of 8 degrees and single amplitude significant pitch angles of 3.5 degrees
 - d. Machinery vibration.
10. System must be designed to handle ordnance. Future shipboard system will require ordnance certification (blast mitigation, spark-less operation, etc.).

7. Points of Contact -

Questions of a technical nature shall be directed to the cognizant Technical Point of Contact, as specified below:

Science and Technology Point of Contact:

Ms. Kelly Cooper
 Office of Naval Research, ONR 334
 875 N. Randolph Street, Suite 1425
 Arlington, VA 22203-1995
 Telephone Number: (703) 696-0869
 Email Address: cooperkb@onr.navy.mil

Questions of a business nature shall be directed to the cognizant Business Point of Contact, as specified below:

Business Point of Contact:

Brenda Burke
Senior Contract Specialist
875 N. Randolph Street, Suite 1425
Arlington, VA 22203-1995
Telephone Number: (703) 588-2440
Email Address: brenda_burke@onr.navy.mil

8. Instrument Types -

It is anticipated that ONR will award one or more procurement contracts for this effort.

9. Catalog of Federal Domestic Assistance (CFDA) Numbers – N/A

10. Catalog of Federal Domestic Assistance (CFDA) Titles – N/A

11. Additional Information – N/A

II. AWARD INFORMATION

The Navy anticipates awarding one or more contracts to be incrementally funded over a period of 5 years. Phase I awards are anticipated to be between \$2M and \$4M per awardee. If awarded, the single Phase II award is estimated to be less than \$100M. The total estimated budget for the TransPORTS program is less than \$125M million dollars.

III. ELIGIBILITY INFORMATION

The Government encourages teaming arrangements between and among the following groups: domestic and foreign companies, universities and institutions, and U.S. government laboratories; however, awards will be limited to teams which have the capability to manufacture and test the prototype demonstrator within the United States.

IV. APPLICATION AND SUBMISSION INFORMATION

1. Application and Submission Process -

Full Proposals - The due date for receipt of Full Proposals is 2:00 p.m. (EDT) on 30 September 2005. It is anticipated that any final selections would be made by 31 December 2005. As soon as the final proposal evaluation process is completed, the Offeror will be notified via email or letter of its selection or non-selection for an award. Proposals exceeding the page limit may not be evaluated.

This Broad Agency Announcement constitutes all the information to be provided regarding this solicitation. No Pre-Proposal Industry Days are anticipated prior to the proposal submission date.

2. Content and Format of Full Proposals -

The Proposals submitted under this BAA are expected to be unclassified. The Proposal submissions will be protected from unauthorized disclosure in accordance with FAR 15.207, applicable law, and DoD/DoN regulations. Offerors are expected to appropriately mark each page of their submission that contains proprietary information.

Full Proposal Format – Volume 1 - Technical and Volume 2 - Cost Proposal

- Paper Size – 8.5 x 11 inch paper, also will allow up to 11X17 inch paper for Schedule and/or Design Concept foldouts
- Margins – 1” inch
- Spacing – single or double-spaced
- Font – Times New Roman, 12 point
- Number of Pages – Volume 1 is limited to no more than 60 pages. Volume 2 does not have a page limitation. Double sided printing is encouraged. The Cover Page, Table of Contents, Statement of Work and Resumes are excluded from the page limitations. Full Proposals exceeding the page limit may not be evaluated.
- Copies – one (1) original, two (2) copies, and five (5) electronic copies on a CD-ROM, (in .PDF format).

Full Proposal Content

Volume 1: Technical Proposal

Cover Page:

This should include the words “Technical Proposal” and the following:

- 1) BAA number;
 - 2) Title of Proposal;
 - 3) Identity of Prime Offeror and complete list of subcontractors, if applicable;
 - 4) Technical contact (name, address, phone/fax, electronic mail address)
 - 5) Administrative/business contact (name, address, phone/fax, electronic mail address)
- and;
- 6) Duration of effort (differentiate basic effort and options)

Table of Contents: (not included in page count)

Statement of Work: A Statement of Work (SOW) clearly detailing the scope and objectives of the program and the technical approach to be taken for both phases, broken

out by phase. It is anticipated that the proposed SOW will be incorporated as an attachment to the resultant award instrument. To this end, such proposals must include a severable self-standing SOW without any proprietary restrictions, which can be attached to the contract or agreement award. Include a detailed listing of the technical tasks/subtasks organized by year.

Prototype Concept Description: A description of the effort that articulates an understanding of the capabilities desired and how the offeror's proposed technologies will be integrated into a single platform to achieve ONR's objectives. Include a description of risk reduction technology development or demonstrations, if any, required prior to preliminary or detail design.

Project Schedule and Milestones: The proposal should include a detailed listing of the technical tasks/subtasks in Work Breakdown Structure format organized by phase and fiscal year. The proposal should also include a schedule of events and milestones for the proposed program keyed to the work breakdown structure and program phases. Deliverables and program review dates should be included.

Assertion of Data Rights: Include here a summary of any proprietary rights to pre-existing results, prototypes, or systems supporting and/or necessary for the use of the research, results, and/or prototype. Any data rights asserted in other parts of the proposal that would impact the rights in this section must be cross-referenced. If there are proprietary rights, the Offeror must explain how these affect its ability to deliver research data, subsystems and toolkits for integration. Additionally, Offerors must explain how the program goals are achievable in light of these proprietary limitations. If there are no claims of proprietary rights in pre-existing data, this section shall consist of a statement to that effect.

Deliverables: A detailed description of the results and products to be delivered for each phase of the program.

Management Approach: A discussion of the overall approach to the management of this effort, including brief discussions of the total organization, use of personnel; project/function/subcontractor relationships; government research interfaces; and planning, scheduling and control practice. Identify which personnel and subcontractors (if any) will be involved. Include a description of the facilities that are required for the proposed effort with a description of any Government Furnished Equipment/Hardware/Software/ Information required, by version and/or configuration.

Experience: A description of the experience and qualifications of the offeror, subcontractors, and key personnel relevant to the proposed effort. Specific examples of work accomplished similar in complexity, magnitude and technical content to that proposed should be provided. Brief resumes (Not Included in Page Limitations) of key prime and subcontractor personnel may be included.

VOLUME 2: Cost Proposal

The Cost Proposal shall consist of a cover page and two parts. Part 1 will provide a detailed cost breakdown of all costs, by cost category, by Gov't fiscal year and Part 2 will provide a cost breakdown by task/sub-task, corresponding to the task numbers in the proposed Statement of Work. Each Program Phase must be separately priced.

The government requires the submission of both the Phase I and Phase II cost proposals for the overall Seabasing INP budget development/scheduling by the proposal due date of 30 September 2005. In addition, a more detailed cost proposal for Phase II will be required as one of the deliverables of Phase I.

A separate cost item, outside of the Phase I and Phase II efforts, to address prototype disposal should be included in the response to this solicitation.

Cover Page: The use of the SF 1411 is optional. The words "Cost Proposal" should appear on the cover page in addition to the following information:

- BAA number
- Title of Proposal
- Identity of prime Offeror and complete list of subcontractors, if applicable
- Technical contact (name, address, phone/fax, electronic mail address)
- Administrative/business contact (name, address, phone/fax, electronic mail address) and
- Duration of effort (separately identify basic effort and any proposed options)

Part 1: Detailed breakdown of all costs, by cost category, by Gov't fiscal year:

- Direct Labor – Individual labor category or person, with associated labor hours and unburdened direct labor rates
- Indirect Costs – Fringe Benefits, Overhead, G&A, COM, etc. (Must show base amount and rate)
- Travel – Number of trips, destination, duration, etc.
- Subcontract – A cost proposal as detailed as the Offeror's cost proposal will be required to be submitted by the subcontractor. The subcontractor's cost proposal can be provided in a sealed envelope with the Offeror's cost proposal or will be requested from the subcontractor at a later date
- Consultant – Provide consultant agreement or other document which verifies the proposed loaded daily/hourly rate
- Materials should be specifically itemized with costs or estimated costs. An explanation of any estimating factors, including their derivation and application, shall be provided. Include a brief description of the Offeror's procurement method to be used (Competition, engineering estimate, market survey, etc.)
- Other Directs Costs, particularly any proposed items of equipment or facilities. Equipment and facilities generally must be furnished by the

contractor/recipient. (Justifications must be provided when Government funding for such items is sought). Include a brief description of the Offeror's procurement method to be used (Competition, engineering estimate, market survey, etc.)

- Fee/Profit including fee percentage.

Part 2 : Cost breakdown by task/sub-task using the same task numbers in the Statement of Work.

3. Significant Dates and Times-

Anticipated Schedule of Events *		
Event	Date (MM/DD/YEAR)	Time (EDT)
Full Proposals Due Date	09/30/05	2 P.M.
Notification of Selection for Award	12/31/05	_____
Contract Award	03/31/06	_____

***These dates are estimates as of the date of this announcement.**

4. Submission of Late Proposals –

Any proposal, modification, or revision, that is received at the designated Government office after the exact time specified for receipt of proposals is “late” and will not be considered unless it is received before award is made, the contracting officer determines that accepting the late proposal would not unduly delay the acquisition and

- If it was transmitted through an electronic commerce method authorized by the announcement, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals; or
- There is acceptable evidence to establish that it was received at the Government installation designated for receipt of proposals and was under the Government’s control prior to the time set for receipt of proposals; or
- It was the only proposal received.

However, a late modification of an otherwise timely and successful proposal, that makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.

Acceptable evidence to establish the time or receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the Government office designated for receipt of proposals by the exact time specified in the announcement, and urgent Government requirements preclude amendment of the announcement closing date, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the announcement on the first work day on which normal Government processes resume.

The contracting officer must promptly notify any offeror if its proposal, modifications, or revision was received late and must inform the offeror whether its proposal will be considered.

5. Address for the Submission of Full Proposals –

Office of Naval Research,
Attn: Brenda Burke, Code 0254
875 N. Randolph Street, Suite 1425
Arlington, VA 22203-1995
Telephone Number: (703) 588-2440

NOTE: PROPOSALS SENT BY FAX OR E-MAIL WILL NOT BE CONSIDERED.

V. EVALUATION INFORMATION

1. Evaluation Criteria –

The following evaluation criteria apply to the Full Proposals. Proposals will be selected through a technical/scientific decision process. Criteria A-C are listed in descending order of priority. Any sub criteria listed under A-C are of equal importance to each other.

A. Overall scientific and technical merits of the proposal.

1. The soundness of technical concept.
2. The offeror's awareness of the state-of-the-art and understanding of scope of the problem and the technical effort needed to address it.
3. Ability of prototype to provide a leap-ahead advancement in operational capability.
4. Game changing capability.

B. Capabilities, facilities, related experience, and past performance of the Offeror and the Offeror's team.

C. Schedule and Cost Realism

The objective of this criterion is to establish that the proposed schedule and costs are reasonable and realistic for the technical and management approach offered, as well as to determine the proposer's practical understanding of the effort. This will be principally measured by cost per labor-hour and number of labor-hours proposed. Cost reduction

approaches that will be received favorably include innovative management concepts that maximize direct funding for technology and limit diversion of funds into overhead.

Socio-Economic Merits - For proposed awards made as contracts, the socio-economic merits of each proposal will be evaluated based on the extent of the Offeror's commitment in providing meaningful subcontracting opportunities (to the maximum extent practicable) for small businesses, HUBZone small businesses, small disadvantaged businesses, woman-owned small businesses, veteran-owned small businesses, service disabled veteran small businesses, historically black colleges and universities, and minority institutions.

2. Evaluation Panel -

Government technical experts from the Office of Naval Research and other Federal entities will perform the evaluation of proposals. The Government may use selected non-government personnel or support contractor personnel to assist in the evaluation and administrative functions of any proposals ensuing from this solicitation. Such non-government personnel will be bound by appropriate non-disclosure agreements to protect proprietary and source-selection information.

VI. AWARD ADMINISTRATION INFORMATION

1. Administrative Requirements –

- CCR - Successful Offerors not already registered in the Central Contractor Registry (CCR) will be required to register in CCR prior to award of any grant, contract, cooperative agreement, or other transaction agreement. Information on CCR registration is available at <http://www.onr.navy.mil/02/ccr.htm>.
- Certifications – Proposals should be accompanied by a completed certification package which can be accessed on the ONR Home Page at Contracts & Grants. For grant proposals and proposals for cooperative agreements or other transaction agreements (other than for prototypes), the certification package is entitled, "Certifications for Grants and Agreements." For contract proposals and for other transaction proposals involving prototypes (Section 845 agreements), the certification package is entitled, "Representations and Certifications for Contracts."
- Online Representations and Certifications Application (ORCA) – In addition to the submission of ONR specific Representations and Certifications, successful offerors not already registered in ORCA will be required to register prior to award of any contract. Information on ORCA registration is available at <http://www.orca.bpn.gov>
- Subcontracting Plans - Successful contract proposals that exceed \$500,000, submitted by all but small business concerns, will be required to submit a Small Business Subcontracting Plan in accordance with FAR 52.219-9, prior to award.

2. Reporting -

Specific deliverables should be proposed by the offeror and will be finalized with the technical program officer and the contract specialist. Reports and hardware deliverables that the Navy anticipates for the proposed program are as follows:

- Monthly technical and financial status reports.
- Detailed schedule for the total program.
- Quarterly progress review presentation material and record of meeting.
- Preliminary design report and drawings
- Simulation plan for Throughput Analysis
- Simulation results report from Throughput Analysis
- Phase II cost proposal
- Detailed design report and drawings
- Prototype construction plan
- Construction drawings
- As-built drawings
- Pier-side test plan
- Pierside test results
- At-sea test plan
- At-sea test results report
- Prototype demonstrator

VII. OTHER INFORMATION

1. Government Property/Government Furnished Equipment (GFE) and Facilities

Each proposer must provide a very specific description of any equipment/hardware that it needs to acquire to perform the work. This description should indicate whether or not each particular piece of equipment/hardware will be included as part of a deliverable item under the resulting award. Also, this description should identify the component, nomenclature, and configuration of the equipment/hardware that it proposes to purchase for this effort. It is the Government's desire to have the contractors purchase the equipment/hardware for deliverable items under their contract. The purchase on a direct reimbursement basis of special test equipment or other equipment that is not included in a deliverable item will be evaluated for allowability on a case-by-case basis. Maximum use of Government integration, test, and experiment facilities is encouraged in each of the Offeror's proposals.

Government research facilities and operational military units are available and should be considered as potential government furnished equipment/facilities. These facilities and resources are of high value and some are in constant demand by multiple programs. It is unlikely that all facilities would be used for this topic. The use of these facilities and

resources will be negotiated as the program unfolds. Offerors should explain which of these facilities they recommend.

2. BAA Questions and Answers

During the solicitation period, potential responders will be able to ask questions pertaining to this BAA via the following website:

http://www.onr.navy.mil/02/baa/05_018/

All questions received and their respective answers will be posted so that all potential bidders can benefit from the information posted.